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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,538	06/13/2002	Yoichiro Sako	64731	1470
530 7590 04/05/2007 LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			EXAMINER LEMMMA, SAMSON B	
			ART UNIT	PAPER NUMBER

2132

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/069,538

Applicant(s)

SAKO ET AL.

Examiner

Samson B. Lemma

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,9,11,13,15,17,25,29,34,37,40,46 and 51-54 is/are rejected.
- 7) ☒ Claim(s) 2,8,10,16,18,20-21,24,28,30,36,38,41 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1-3, 5, 7-11, 13, 15-18, 20-21, 24-25, 28-30, 34, 36-38, 40-42, 46 and 51-54.

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DETAILED ACTION

1. The request filed March 08, 2007 for a request for continued examination (RCE) under 37 CFR 1.114 based on patent application 10/069,538 is acceptable and an RCE has been established. Claims 4, 6, 12, 14, 19, 22-23, 26-27, 31-33, 35, 39, 43-45, 47-50, and 55-86 are canceled.

Thus, claims **1-3, 5, 7-11, 13, 15-18, 20-21, 24-25, 28-30, 34, 36-38, 40-42, 46, and 51-54 are pending in this application.** Every pending independent **claims 1, 9, 17, 25, 40 and 51 are amended.**

2. **Independent Claims 1, 9, 17, 25, 40 and 51** were rejected under 35 U.S.C. 112, first paragraph. However, applicant's representative amended the respective claims and overcome the rejection. Thus 35 U.S.C. 112 is withdrawn.

Claim Objections

3. Dependent claim 29 is objected to because of the following informalities: Dependent claim 29, depends on the canceled claim 27. For the purpose of examination, it is assumed that claim 29 depends on claim 28. Appropriate correction is required.

Response to Arguments

4. Applicant's arguments with respect to claims **1-3, 5, 7-11, 13, 15-18, 20-21, 24-25, 28-30, 34, 36-38, 40-42, 46, and 51-54** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3, 5, 7-11, 13, 15-18, 20-21, 24-25, 28-30, 34, 36-38, 40-42, 46, and 51-54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa, Kunihi (hereinafter referred to as **Miwa**) (European Publication, EP 0942418 A1), published on 09/15/1999 (submitted with IDS), in view of **Kuroda, Kazuo** (hereinafter referred to as **Kuroda**) (European Publication, EP 0969463 A1), published on 01/05/2000 (submitted with IDS), further in view of Shoji et al (hereinafter referred to as **Shoji**) (U.S. Patent No. 6,157,609) (filed on 10/27/1999)

7. **As per claims 1, 9, 17, 25, 40 and 51, Miwa discloses a recording method for a recording medium,** [Abstract, "RAM" or "ROM"] **comprising the steps of:**
Recording main data onto a recording medium on which an identification part indicating a type said recording medium provided, so that said main data are readable as optical changes; [paragraph 0011] (management information is met main data and this management information is embedded/recorded on medium of a type such as RAM(rewritable type) or R(write-once type) meets the limitation of an identification part indicating a type said recording medium as it is recited on paragraph 0011) and

Embedding sub data at least into a part of said main data based [paragraph 0013, "additional information is met to be sub data"]

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Miwa does not explicitly disclose embedding subdata based on a format corresponding to said type of said recording medium and recording said sub data along with said main data.

However, in the same field of endeavor Kuroda, discloses embedding sub data based on a format corresponding to said type of said recording medium and recording said sub data along with said main data.[paragraph 0005, paragraph 0021-0022] (the type of said recording medium is interpreted as it is recited on the dependent claim 3)

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to combine the feature of **embedding data based on a format corresponding to said type of said recording medium** as per teachings of **Kuroda** in to the method of **embedding data** as taught by **Miwa**, in order to provide a secure method of prohibiting reproduction of digital information illegally. [see, Kuroda, paragraph 0001, the last 2 lines]

The combination of Miwa and Kuroda does not explicitly disclose recording the modulation processed data on to the recording medium and wherein the margin bits are used for adjustment of deviation in a direct current balance of the recorded modulation processed main data.

However, in the same field of endeavor, **Shoji** discloses the following on column 30, lines 17-32, which meets the limitation recited as "recording the modulation processed data on to the recording medium."

"When a optical disc 101 is loaded, the optical head moves to writing test zone 202 for determining the best power level. Switch 121 is conductive through contacts 122 and 124 at this time. The power level setting circuit 119 first sets the default peak and bias

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power levels to the laser drive circuit 109. The output signal from unique pattern generator 127a of the recording data generator 127 is then modulated by the modulation circuit 126, and passed through switch 121 to the pulse generator 111 for conversion to a pulse signal. This pulse signal is then passed through delay circuit 138 to the pulse moving circuit 110 from which a signal in which the leading and trailing pulse edges are shifted is output. **Signal patterns output from the modulation circuit 126 are shown in FIG. 20. These signal patterns can be prestored to the optical disc or in the disc recorder.**" [See Shoji, Column 30, lines 17-32]

Furthermore, Shoji discloses the following, "fig. 16 is a plan view of yet another optical disc 1601. With this disc format user data is recorded to data area 1602. Information indicative of the method used to adjust the first pulse and last pulse according to the input data signal is recorded to area 1603 at the inside circumference area of the disc using a sequence of pits and lands (marks and spaces). Recording area 1604 at the inside circumference of the disc is used during disc production to record either optimized or typical position information for the first or last mark edge position using a sequence of pits and lands (marks and spaces)." [Column 30, lines 17-32]

Furthermore, Shoji discloses the following, "If information specific to the optical disc 1201, such as the disc manufacturer, product number, production date and location, disc format, and recording film type, is stored to area 1203 of the optical disc 1201 shown in FIG. 12 in addition to the adjustment method information, this disc-specific information and the temporary power level information (such as peak power, bias power, margin constant, asymmetry information) used for adjusting the leading and trailing mark edge positions can be stored to memory 130 of the disc recorder." [Column 30, lines 17-32].

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Therefore, the above fact, meet the limitation, recited as "wherein the margin bits are used for adjustment of deviation in a direct current balance of the recorded modulation processed main data." The above limitation is interpreted at it is disclosed on the following applicant's specification/publication.

"Another role of the margin bits is adjustment of deviation in the DC (direct current) balance. Since the main data is recorded by edge recording as described above, the position of the data bit "1" may correspond to the edge, which is the boundary between a pit and a land. Therefore, any of the recording attributes of pits and lands may be arranged before or after the data bit "1". However, in consideration of the DC balance of the recording signal, it is preferred that the probabilities of appearance of pits and lands are equal." [See applicant's Publication on Paragraph 0056]

"The 14-bit data symbol, too, is selected in consideration of the DC balance of the recording signal, but it is insufficient and the DC balance is adjusted by margin bits. The DSV (digital sum value) before margin bits is found and the margin bits are selected from the above-described four types so that the DSV becomes zero as much as possible." [See applicant's Publication on Paragraph 0057]

"The main data is recorded as changes and no changes of the recording attributes, as described above. For example, in the case of a ROM-type disc, the main data is recorded as the edges of pits and no information is recorded on the pits and lands themselves. In this embodiment, sub data is recorded and embedded by causing the sub data to correspond to the recording attributes of the pits and lands themselves." [And See applicant's Publication on Paragraph 0058]

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to combine the feature of **recording the modulation processed data on to the recording medium** and wherein the margin bits are used for

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adjustment of deviation in a direct current balance of the recorded modulation processed main data as per teachings of **Shoji** in to the method of **embedding data** as taught by the combination of **Miwa and Kuroda**, in order to provide a method for easily determining the optimum positions the leading and trailing edges of each mark, thereby achieving optimized recording.[see, Shoji column 2, lines 49-55]

8. **As per claims 3, 11, 34,46 and 52-54 the combination of Miwa, Kuroda and Shoji** discloses a method as applied to claims above. Furthermore, Kuroda discloses the recording method wherein said sub data is embedded on the basis of a format corresponding to the type of said recording medium, of at least a first format for a reproduction-only recording medium and a second format for a recordable recording medium. [Paragraph 0021-0022]

9. **As per claims 5,7,13,15 and 37 the combination of Miwa, Kuroda and Shoji** discloses a method as applied to claims above. Furthermore, Miwa discloses the recording method wherein modulation processing is performed on said main data, which is then recorded onto said recording medium, and said sub data is embedded into margin bits of said modulation-processed main data. [Paragraph 0040]

Allowable Subject Matter

10. **Claims 2,8,10,16,18,20-21,24,28,30,36,38 and 41-42** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See PTO-Form 892).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samson B Lemma whose telephone number is 571-272-3806. The examiner can normally be reached on Monday-Friday (8:00 am---4: 30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BARRON JR GILBERTO can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAMSON LEMMA

S.L.
03/29/2007


Benjamin E. Lanier
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